

REMARKS

Please reconsider this application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of the Claims

Claims 1-8 are pending in this application. Claims 1, 5, and 8 are independent. The remaining claims depend, directly or indirectly, from the independent claims.

Amendments to the Claims

Claims 1, 5, and 8 have been amended by way of this reply to clarify the claimed invention. No new matter has been added by these amendments. Support may be found, for example, in the original claims and paragraphs [0028] and [0036] of the published specification.

Rejection(s) under 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,481,610 (“Doiron”) in view of U.S. Patent Application Publication No. 2003/0182565 (“Nakano”). To the extent this rejection may still apply to the amended claims, this rejection is respectfully traversed.

The present invention “relates to equipment for DVD capable of protecting prescribed information such as a password or key data for encryption or decryption recorded in a memory, and a method and an apparatus for recording the prescribed information.” *See* paragraph [0002] of the published application. The present invention “includes a memory in which key data

associated with information on a DVD is recorded in advance, and a processing portion processing information on the DVD using the key data from the memory. In the memory, random data is written around the key data.” *See* paragraph [0009] of the published application. The key data may serve as both an encryption and a decryption key for equipment that encrypts and records or decrypts information read from a DVD. *See* paragraphs [0011] and [0012] of the published application. Multiple key data may be stored in multiple locations in the flash memory surrounded by random data. *See* paragraph [0029] and fig. 2 of the published application.

The present invention writes the key data prior to placing randomized data adjacent to it within a rewritable flash memory of prescribed size so that “the key data stored in the memory can be protected against copy or peeping.” *See* paragraphs [0009], [0010], [0014], and [0028] of the published specification. To read the prescribed information from the flash memory, it is necessary to designate the specific area in the flash memory as well as to designate the prescribed address. In addition, the specific area in which the prescribed information and random data are written is an area having a prescribed size comparable to one access unit of the flash memory. Thus, the prescribed information and the random data can be written through a single access to the flash memory. The key data can also be modified by a key data writing equipment.

Claim 1, as amended, recites, in part, “a rewritable flash memory of prescribed size in which key data” “is recorded in advance in a prescribed address in an unused specific area” “accessing the information on said digital video disc” “using said key data read from said prescribed address in said flash memory” “wherein random data is written in entire unused area around an area where said key data is recorded in said specific area of said flash memory,” and that “the key data

can be modified by a key data writing equipment.” Claims 5 and 8, as amended, recite, in part, substantially similar limitations to that of claim 1 noted above.

Thus, in the present invention, the key data is written in a prescribed location to a rewritable flash memory of prescribed size. The prescribed information is then surrounded by random data, and the rewritable flash memory of prescribed size with random and key data is surrounded by the program data. Thus, it is difficult to extract the prescribed information. The location of the prescribed information within the random data is unknown and the prescribed address of the prescribed information is unknown. *See* paragraphs [0028], [0029], and [0035] of the published specification. Thus, the key data is indistinguishable from the program data within the flash memory.

Doiron relates to “radio frequency (RF) communications systems, and more particularly to digital radios having a “secure” mode that encrypts and decrypts messages. Still more particularly, the present invention relates to techniques for securely loading and storing cryptographic key information within a mobile or portable radio transceiver. *See* column 1, lines 6-12 of Doiron. Doiron relates to writing key data “within a field of randomized data.” *See* column 15, lines 2-7 of Doiron. This requires placing random data first, and then overlaying the key data within the field of randomized data. Each time the key data is accessed, the starting location of the key block is changed according to an equation. *See* column 10, lines 6-27 of Doiron. In contrast, the present invention locates the key data, and random data, in a prescribed location, not moving it during each access of the key loader equipment.

Doiron relates to a single key table that can contain multiple key banks and surrounding it with random data. *See* column 10, lines 6-27 and fig. 3. In contrast, the present invention permits writing key data in multiple locations in the flash memory and surrounding each key data with random data. *See* paragraph [0029] and fig. 2 of the published application. In the present invention the key data is stored in a single unit of rewritable memory, for example 32 Kb, allowing access and modification in a single unit of memory. The present invention allows for each key data to be surrounded by random data and not all located in a single table or location in the flash memory.

As amended, claims 1, 5, and 8 relate to a rewritable flash memory in which key data is written at a prescribed address in an unused area of the flash memory. The key data is used to access information on a digital video disc. The key data is protected from third parties because the prescribed address is unknown and random data is written in the unused portions of the flash memory where the key is recorded. The key data can be modified by key data writing equipment. Doiron fails to show or suggest, at least, the above referenced limitations of the claimed invention. Furthermore, Nakano fails to show or suggest that which Doiron lacks.


In view of the above, independent claims 1, 5, and 8 are patentable over Doiron and Nakano, whether considered separately or in combination for at least the reasons set forth above. Dependent claims 2, 3, 4, 6, and 7 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04536/034001).

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Respectfully submitted,

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